

method of accessing new technology developed by the national laboratories.

Scientific User Facilities

Scientific user facilities, including several fusion facilities, are available to university and industrial researchers for approved projects. Potential user research proposals are reviewed for appropriateness and quality, and access to a facility is based on the scientific merit of the proposal. Traditionally, if users publish the results of their work, there is no charge for using the facility; if the work is proprietary, users pay the full cost of using the facility, and results are not published. Patent rights to inventions are generally given in advance to users paying full costs.

Industrial Interactions

Several methods are used for interactions with private industry. Some interactions occur on a program-specific basis, others through conferences and workshops sponsored by the laboratories. DOE and its laboratories are major participants in and supporters of the Federal Laboratory Consortium, which focuses on facilitating increased interactions between U.S. industry and federal laboratories. Events sponsored by the Industrial Research Institute and interaction with state and local governments are other mechanisms for industrial interactions.

Technical Personnel Exchanges

Personnel exchanges with U.S. industries and universities are an important component of DOE technology transfer efforts. Exchanges may be conducted through specific R&D programs or arranged on an informal basis with the laboratories.

Reimbursable Work for Others

The DOE fusion research facilities are available to perform work for industry or other federal agencies as long as the work

- pertains to the fusion mission,
- does not adversely affect the achievement of program requirements, and
- does not directly compete with capabilities available in the private sector.

A patent waiver can be obtained from DOE to give ownership of any inventions resulting from the research to a participating company.

Consulting Arrangements

Scientists and engineers at DOE fusion research institutions are available to consult in their areas of technical expertise. Each contractor has its own consulting practices; staff members are generally free to negotiate contracts for consulting and can sign nondisclosure agreements.

University Interactions

Support for the training of the next generation of scientific and technical leaders is provided in several ways. DOE provides funds for graduate students and post-doctoral research fellows at universities and at fusion research institutions. Ongoing research and education programs bring faculty, undergraduate students, and precollege science teachers and students to DOE's fusion research institutions. Increasing emphasis is being placed on reaching minority and women students through educational outreach and training programs.

Research collaborations among university, private-sector, and federal scientists take place throughout the fusion program by means of formal

collaborative agreements, administrative procedures for large-scale computing, and joint appointments of scientists.

Contracting Agreements

Subcontracts, hardware procurements, and (less frequently) grants are used by DOE's fusion research institutions to work with industry and universities. These contracting agreements offer an opportunity for the private sector to participate in the development of new technology, as well as facilitating more effective communication between the participants.

Technical Information and Software

Technical documents and database software are traditional means of disseminating information on research results and technologies available at fusion research institutions. Copies of reports originating at DOE fusion research institutions are submitted to DOE's Office of Scientific and Technical Information (OSTI) in Oak Ridge, Tennessee, and to the National Technical Information Center in Springfield, Virginia. OSTI also compiles and maintains databases and computer software to assist individuals in determining the types of technical activities conducted by DOE research laboratories.

The National Technology Transfer Center in Wheeling, West Virginia, represents a new resource for potential technology users. By dialing the Center's toll-free telephone number (1-800-678-NTTC), technology users can access an index to all federal technology databases.